recommends that such unrestricted fixed wireless local services be provided in the 37-40 GHz band.[64]

The problem with WinStar's proposal to permit flexible use of the 37-40 GHz band is that it would allow two completely different technologies to use the same band. Such sharing would destroy the integrity of FS operations and would impede development of the wireless technologies depending upon this band as a platform for their services. Permitting unlimited flexibility in the 37-40 GHz band, including authorization of mobile services, would be incompatible with FS operations. By its nature, FS permit extensive sharing among users, thereby maximizing efficient use of the spectrum. Once mobile operations are superimposed, sharing of the 37-40 GHz band between the two services becomes unrealistic. In contrast, under the Commission's proposal in the CMRS Flexibility NPRM, sharing within the CMRS bands would be feasible because two different technologies would not be forced to share. Rather, superimposition of a fixed operation upon a mobile service operation can be done because, presumably, all are a part of the same communications system. The earmarking of a CMRS channel to carry out an additional function, fixed in nature, can be accomplished without impairing the mobile service. However, superimposition of mobile operations upon a band allocated for FS creates a "mix" that will not work, and WinStar submits nothing herein or in its Comments on the CMRS Flexibility NPRM that prove otherwise.

Fixed-Service Satellite -- Motorola Satellite proposes that the Commission: (i) allocate the 37.5-38.6 GHz band to Fixed-Service Satellite ("FSS") downlinks; and (ii) adopt, for the 37.5-40.5 GHz band, the limits on pfd that apply to that band under the ITU Radio Regulations, Art. 28, §4(6),

[64]See Comments filed March 1, 1996, by WinStar in WT Docket No. 96-6 at 3.

RR 2578, 2582, 2583, 2584.[65] Motorola Satellite claims that "[a]doption of [these] limits will ensure sharing between satellite downlinks and terrestrial services in this spectrum" and that these "limits will allow FSS systems and microwave operators to co-exist on a co-primary basis."[66]

TIA totally disagrees. Asking for more FSS spectrum to provide high-speed broadband voice, video, and data is premature. FSS providers have not even started to use their very recently allocated spectrum at 18 and 28 GHz. The pfd limits in the ITU regulations referenced by Motorola Satellite still are preliminary and are applicable only until such time as modified by a World Radio Conference.[67] At a minimum, more information is needed regarding the operations of the proposed satellite systems, such as time spent by how many satellites at which angle, before any sharing could be considered.

More importantly, the pfd criteria for sharing between FS and FSS users are unacceptable.[68] Application of these criteria would greatly increase the negative impact of multipath, which already contributes about 200 seconds of outage for a 5-mile path.[69] Practice has shown that 3-5 mile paths could be realized in the 37-40 GHz band. The longer the path, the more important the multipath negative contribution. When multipath occurs, the satellite interferer is realistically not affected. A primary service, like FS, should not accept such degradation.

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[65]Motorola Satellite at 2-3. In addition, Motorola Satellite made this request in a concurrently filed Petition for Rulemaking.

[66]Motorola Satellite at 3-4.

[67]See ITU Radio Regulation Art. 28, note 4.

[68]For example, the proposed -115 dBW/m^2 pfd for the 0-5 degree angle of arrival is unacceptable at 0 degrees. This level translates into a 15-19 dB degradation of threshold in the case of 45 Mb/s 16QAM or 4FSK radios. This is based on using 2 foot antennas which are 60% efficient and taking C/N ratios from ITU-R recommendation F.1101.

[69]Arguably, rain attenuation could contribute to this problem.

B. Point-To-Multipoint Users Should Be Permitted Access At A Later Date.

TIA supports eventual entry by point-to-multipoint users into the 37-40 GHz band. Such entry would be in the public interest because "[t]hese services complement FS, are a natural evolution of wide area-based point-to-point services, and provide beneficial public services."[70] However, TIA recommends deferring the opening of the 37-40 GHz band to point-to-multipoint users to a later date so that "[s]pecific technical rules [could] be adopted to ensure that point-to-multipoint equipment incorporates appropriate receiver selectivity and other necessary safeguards against interference to point-to-point users."[71]

Support exists for eventually permitting point-to-multipoint users in the 37-40 GHz band. Pacific Bell Mobile declares that "[w]hile we do not believe there is a need for unpaired channels, we do support some flexibility in the rules to allow the use of the spectrum for other fixed services such as point-to-multi-point."[72] Spectrum wants the Commission to channelize the band to "accommodate an array of services, including point-to-multipoint."[73] Only TGI opposes such use of the band, fearing it would "significantly impair the availability of this spectrum for the primary point to point use."[74]

The parties supporting point-to-multipoint use, as well as TGI, all should be satisfied by TIA's proposal to defer addressing this issue. Appropriate technical and other operating standards for point-

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[70]TIA at 23.

[71]TIA at 23.

[72]Pacific Bell Mobile at 5. See also PCIA at 4; ART at 45; Milliwave at 27; TDS at 4; Ameritech at 8-9.

[73]Spectrum at 3. See also GEC at 5; Altron at 2.

[74]TGI at 3.

to-multipoint use have not been proposed by the Commission or by any other commenter. With the acute immediate need for point-to-point spectrum, this proceeding should not be delayed until such point-to-multipoint rules can be formulated and reviewed. Once this proceeding is completed, if there is an interest in developing point-to-multipoint rules that would ensure adequate spectrum remains available for point-to-point users, TIA will promote prompt initiation of an industry standards-setting process and it will actively participate in such a proceeding.

IV. SHARING THE 37-40 GHz BAND WITH THE GOVERNMENT MUST BE RESTRICTED

The Commission proposes that non-Government users share the 37-40 GHz band with Government users, including Government space research services.[75] Concern over these proposals however, is reflected throughout the record.

A. Restrictions On Government Sharing Are Needed.

TIA does not concur with the Commission's proposed criteria for coordinating between Government and non-Government users on the 37 GHz band. Given the fact that sharing between non-Government and Government users historically has been quite difficult and time consuming for the private sector, TIA recommends that the Government revise its coordination procedures to conform with private sector procedures.[76] Nevertheless, if such sharing were permitted, specific measures must be implemented to protect private sector users. In addition, TIA proposes that the Commission restrict Government licensee access to the 37 GHz band by limiting such use to the single channel pair to be allocated for private FS users and by permitting such access only if the

[75]NPRM at para. 120.

[76]TIA at 27.

Government users meet the applicable prior coordination procedures consistent with Part 101 guidelines.[77]

The record reflects ample concern over sharing the 37-40 GHz band with Government users. Indeed, WinStar[78] and Pacific Bell Mobile directly oppose any such sharing.

> Existing rules decidedly favor the Government. The NTIA has complete control of whether the non-government user is allowed to construct. Moreover, protection areas for space-to-earth stations are very large because of their low-interference objectives. Consequently, PCS users would be limited under existing rules even if they are co-primary.
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> The prospect of sharing would mean that bidders would have a great deal of trouble valuing the spectrum because they would have to determine the value of something that they may be denied the use of. If any sharing is permitted, the NTIA should be required to follow the same prior coordination practices of Part 21 users and adopt terrestrial interference standards as defined in Telecommunications Industry Association Bulletin 10.[79]

Primary among the concerns over Government band sharing is the historical difficulty in coordinating frequencies because the procedure is inconsistent with private sector protocols. To avoid continuation of this problem, if Government band sharing is to occur, NSMA recommends that:

> Any Government Fixed Service Use of the 37 GHz band should be subject to the same coordination process, procedures, and coordination timeframes utilized among non-Government entities. NSMA urges the Commission to work [in this proceeding] and within the Interdepartment Radio Advisory Committee framework, to streamline the existing Government/non-Government frequency coordination process to bring it more into harmony with the legitimate time requirements of commercial operators and to avoid inequitable burdens on non-Government and Government users alike.[80]

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[77]TIA at 27-28.

[78]WinStar at 64.

[79]Pacific Bell Mobile at 3 (footnote omitted).

[80]NSMA at 5 footnote 5.

Consistent with this proposal, PCIA recommends that

> government use of the band should be subject to the same industry prior coordination procedures and terrestrial interference objectives adopted as industry standards for non-government users. Obviously, the industry has no interest in creating difficult or burdensome procedures or restrictive interference criteria, and government compliance with such standards would not be onerous. At the same time, any such standards are the minimum necessary to ensure that critical public communications systems are not disrupted by interference and should be enforced evenly on all users of the band.[81]

Comsearch fears that sharing with Government users would devalue the band. It asserts that the only way to accomplish sharing would be licensing on a link-per-link basis:

> Utilizing current link-by-link licensing procedures for certain designated channel blocks would facilitate coordination between Government and non-Government licensees. Instead of having to request system information from incumbents as proposed in the NPRM, governmental agencies interested in deploying facilities would only need to refer to Commission records to obtain the appropriate data . . . . To further streamline the process, we propose that the NTIA establish a direct point of contact to be responsible for the receipt and processing of shared-band coordination notices. **Inclusion of the Government in the initial 30 day prior coordination process in shared bands, prior to application submittal, would expedite identification and resolution of potential problems and would significantly reduce delays found in the current process.** Instead of applicants going through the time and expense of initiating multiple coordinations and potentially "unacceptable applications," interference conflicts could be resolved expeditiously during the initial coordination period. The requirement for NTIA involvement in shared bands takes on even more significance with the changes specified in the recently adopted Rule Part 101 permitting carriers to operate their facilities upon license application filing, after successful completion of prior coordination.
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> The designation of specific channel blocks to be shared between Government and non-Government individual point-to-point links and satellite-earth station operations would unencumber the remaining 37 GHz band and facilitate the Commission's desire to initiate auctioning of this spectrum. The ability to

[81] PCIA at 9-10.

> license links on an individual basis will also provide smaller users with the opportunity to utilize the spectrum on an as needed basis.[82]

If band sharing is permitted, TIA favors Comsearch's approach to coordination with the Government. Establishing a more streamlined, time-sensitive procedure is absolutely vital to optimizing non-Government user access to the 37-40 GHz band.

B. Sharing With Government Space Research Users Must Not Be Approved.

In response to a NTIA request, the Commission also solicits comment on the acceptability of allocating "the 37-38 GHz band . . . to the space research (space-to-Earth) service for Government use on a co-primary basis with the fixed and mobile services."[83] TIA opposes this proposal because sharing criteria for this band, including the pfd, proposed by the Commission in the NPRM,[84] are inappropriate for co-primary FS operations and would cause material disruption to private sector licensee path performance.

No support exists in the record for this proposal. As detailed above, there is general concern that any sharing of the 37-40 GHz band with Government users would decrease significantly the availability of spectrum for non-Government users on a timely basis.

Moreover, several parties express specific concern over sharing the band with Government space research users. PCIA concludes that it would

> disrupt point-to-point communications because the power flux density limits proposed in the [NPRM] are insufficient to ensure non-interference. As a result of excessive power flux density limits and the potential for low elevation angles from satellites, space transmissions in the band would cause

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[82]Comsearch at 4-6 (emphasis added and footnote omitted).

[83]NPRM at para. 14.

[84]See NPRM at para. 14 footnote 24.

> wide swaths of the 37 GHz band to be unusable for terrestrial communications.[85]

Harris considers the proposed sharing to be

> unrealistic and inconsistent with co-primary sharing with terrestrial fixed operations. Due to the foreseen proliferation of broadband millimetric links and their increased use for back-haul, multimedia, wireless LANs, and multipoint distribution of broadband data, establishing antenna pointing instructions or EIRP limitations would be impractical.[86]

DMC "is strongly opposed" to this proposed sharing because the "anticipated nature of fixed services that will be using the band is such that sharing arrangements would be unrealistic."[87] Thus, based on the clear and uncontroverted record of this proceeding, sharing with Government space research users cannot be permitted.

IV. IF AUCTIONS ARE ADOPTED, SPECTRUM NEEDS BY PCS AND PRIVATE FS LICENSEES MUST BE PROTECTED

The Commission ignores Section 309(j) of the Act and proposes auctioning all licenses in the 37-40 GHz band.[88] While TIA and numerous other parties strenuously oppose any auctioning of FS links because it is unlawful under Section 309(j) of the Act and because it is inappropriate for such facilities, unfortunately it is quite apparent that the Commission fully intends to pursue this licensing approach. Under these circumstances, TIA and other commenters recommend that the Commission take a conservative course of action and protect PCS and private FS licensees from the full force of the auction process.

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[85]PCIA at 4 (footnote omitted).

[86]Harris at 3-4.

[87]DMC at 3.

[88]NPRM at paras. 25-28.

If auctions are used, certain safeguards must be adopted. TIA recommends that the Commission reserve six (6) channel pairs in the 37 GHz band BTAs for PCS licensees until three (3) months after the last broadband PCS license is issued.[89] TIA also recommends that the Commission reserve a single channel pair in the 37 GHz band for private FS users indefinitely.[90] While these PCS and private FS channel pairs are reserved, they would be licensed under conventional application procedures and would not be auctioned. The remaining 37 GHz band channels, as well as any unlicensed 39 GHz band application, still could be auctioned.[91]

TIA is not alone in its opposition to auctioning FS links. Requiring PCS licensees to engage in a second bidding contest would be unfair. Pricing and other business decisions made during the PCS auctions properly assumed that intermediate links would not be subject to competitive bidding. PCIA justifiably complains about this "surprise" by warning the Commission that "[since] PCS applicants have already spent or bid over $13 billion on securing licenses for their offerings to the public, the imposition of additional costs for necessary ancillary facilities will only increase the cost of service to the public and delay the implementation of service."[92] Pacific Bell Mobile registers a similar complaint:

> Access to economical backhaul is critical to bringing reasonably priced PCS service to the market. An auction involving such sums for backhaul links would force many to forego point-to-point microwave links in favor of landline links which are often costly themselves but not as costly as the microwave may be in an auction scenario.

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[89]TIA at 19.

[90]TIA at 19.

[91]TIA recommends that the Commission define these auctionable areas so that they do not cross any BTA boundaries. Auctions also would be conducted for any grandfathered RSA where the licensee fails to meet applicable build-out requirements. TIA at 19-20.

[92]PCIA at 7.

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> The Commission should keep in mind that when PCS providers were considering the value of PCS licenses, they assumed that they could use inexpensive point-to-point microwave links for backhaul. Under the Commission's auction proposal this may no longer be the case which means that the public will have to pay more for PCS services.[93]

While the majority of parties may favor auctions,[94] the foregoing concerns merit full Commission attention. Given the restrictions under Section 309(j) of the Act, auctioning intermediate links for PCS and for private FS users has not been contemplated.[95] A set aside is necessary so that these users are not penalized. Like TIA, PCIA recommends this approach:

> Because auctioning of intermediate links is contrary to the governing legislation on broader public interest policies, PCIA believes a set-aside of channels for PCS and other CMRS carriers is necessary. Unless spectrum for backhaul uses is specifically designated, there will be no way to differentiate applications that are and are not subject to auctions. PCIA accordingly urges the Commission to adopt its proposal to reserve channel pairs for PCS and other CMRS carriers and to license those channels without auction procedures.[96]

However, there is no reason to set aside PCS channels in the 37-40 GHz band indefinitely. TIA's proposal, to reserve six (6) channel pairs in the 37 GHz band BTAs for PCS licensees until

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[93]Pacific Bell Mobile at 2-3. See also Harris at 3 ("PCS providers should not be required to go through a costly 'second' auction procedure before establishing their wireless backbone infrastructure"); TGI at 3 ("[a]uctions are inappropriate for this service given the very limited number of legitimate users expected"); Alcatel at 2.

[94]See, e.g., WinStar at 14-18; BizTel at 14; Commco at 8; GTE at 6-7; Columbia at 19-20; Spectrum at 3; Altron at 3; GEC at 7; Milliwave at 8-10.

[95]One argument favoring auctions has been that the high up-front costs will encourage prompt service initiation. However, this argument is undercut by several parties which claim that this incentive does not exist. See, e.g., BizTel at 25.

[96]PCIA at 8. See also TDS at 8.

three (3) months after the last broadband PCS license is issued,[97] is the most prudent approach because it provides PCS licensees adequate time to obtain their FS licenses before auction requirements would be imposed.

AT&T properly recommends that this set-aside for PCS be of "limited duration:"

> First, since the FCC has properly recognized that there is a need for backhaul/backbone spectrum for broadband PCS services and the 37 GHz band is ideally suited to meet those needs, the proposal ensures that broadband PCS licensees have an opportunity to obtain the spectrum they need in order to promptly deploy broadband PCS services at reasonable prices. Second, the proposal does not preclude non-broadband PCS licensees (including other CMRS providers and non-CMRS entities) from applying for and receiving authorizations for significant amounts of 37 GHz spectrum. Third, the set-aside is only in effect for as long as it takes broadband PCS licensees to plan their backhaul/backbone systems and to get applications for such facilities on file with the Commission.[98]

TIA also recommends protecting private FS users from auctions indefinitely.[99] Since TIA recommends setting aside only a single channel pair for private FS licensees, there is no reason to jeopardize their operations by limiting this exemption. Thus, TIA reiterates its proposal that private FS users always be licensed without auctions.

V. SERVICE AREAS FOR THE 37-40 GHz BAND MUST BE COMPATIBLE

It is critical that the Commission formulate a plan for ensuring compatible service areas throughout the 37-40 GHz band. Unfortunately, the Commission did not make such a proposal. Instead, it proposed licensing both the 37 GHz band and the 39 GHz band on a BTA basis.[100]

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[97]TIA at 19.

[98]AT&T at 6.

[99]TIA at 19.

[100]NPRM at para. 21.

If the Commission's proposal is adopted, chaos could result and BTAs, where grandfathered 39 GHz licensee RSAs exist, could contain large amounts of unusable area. TIA recommends solving this by treating the 37 GHz band and the 39 GHz band service areas differently.[101] In the 37 GHz band, TIA supports using only BTA service areas because no prior licensed service areas exist, so no conflicts would result. To avoid creating unusable areas, TIA urges the Commission to forego imposing BTAs on the 39 GHz band and to maintain the status quo with only RSAs.[102]

The record regarding service areas is inconclusive. Nevertheless, it is critical that the Commission not allow this vacuum to determine how it establishes service areas. At a minimum, the Commission must establish a licensing process that would prevent the conflicts likely to be created under its proposal in the NPRM. In addition, to maximize service availability, the Commission must revise its proposal so that larger areas do not remain unlicensed.

VI. BUILD-OUT REQUIREMENTS FOR LICENSEES IN THE 37-40 GHz BAND MUST BE RELATED TO INDIVIDUAL SERVICE AREA CHARACTERISTICS

TIA generally supports imposing build-out requirements to expedite implementation of service in the 37-40 GHz band and to preclude spectrum warehousing. Instead of the Commission's across-the-board, generic approach in the NPRM, TIA argues that build-out requirements must be based upon service area population or population density:

> It is essential that the Commission adopt build-out requirements for FS users in the 37-40 GHz band that are related to the individual characteristics of a licensee's particular BTA or other service area. If the service area is sparsely populated throughout, or if it contains a limited number of population centers, the build-out requirements should be more conservative than the build-out requirements for an urbanized or heavily populated service area. Otherwise, licensees in the less populated service area would be discriminated against because they would be required to fund construction and operating costs in a

[101]TIA at 8-10.

[102]TIA at 10.

> market where there is less potential for return than in the more populated service area. Risk of inadequate service, or even loss of service, would be increased under generic, non-market-specific, build-out requirements. Furthermore, competitive wireless service entrepreneurs, such as CAPS or PCS licensees, need build-out requirements that would be flexible enough to vary from service area-to-service area.
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> Instead of imposing the identical build-out requirement for each BTA or service area, TIA proposes that the Commission establish criteria designed to maximize licensee flexibility and to correlate with individual service area characteristics. At a minimum, these criteria should include the service area population or population density.[103]

Universal strong opposition to the Commission's build-out proposal is set forth in the comments.[104] The bases for this manifest opposition include the fact that the criteria proposed are not "rationally related to market demand"[105] and that they are too expensive for a licensee to satisfy.[106]

Although opposition to the proposed build-out criteria is quite vehement, no clear consensus on appropriate criteria is found in the comments. Nevertheless, most parties suggest that the Commission use market characteristics, especially the population factors TIA suggests, as the governing criteria in developing build-out requirements.[107] For example, ART recommends that

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[103]TIA at 20-21. For FS users, TIA recommends subjecting these licensees to any build-out requirements generally applicable under Part 101. TIA at 21.

[104]See, e.g., WinStar at 50-56; Alcatel at 2; Milliwave at 17-23; Harris at 2; Sintra at 2-5; BizTel at 23-35; ART at 10-26; DCT at 2-15; PCIA at 8; Astrolink at 9; Bachow at 13; Columbia at 17-19.

[105]BizTel at 28.

[106]See e.g., Milliwave at 22; DCT at 5; Astrolink at 10; Bachow at 13-14; Columbia at 17.

[107]See, e.g., Alcatel at 2; Sintra at 3; PCIA at 8; BizTel at 28; Astrolink at 10-11.

the "construction requirement must take into account differences both in the size of each license area and its demand characteristics (as represented by population density)."[108]

The Commission must ensure that the efforts by CAPs and other 39 GHz licensees to provide competitive viable service are not impeded. Consequently, in developing new build-out requirements, as the record requires, the Commission is obligated to use population and related criteria.

BizTel and Bachow also suggest that, regardless of what build-out approach is adopted, the Commission must require that 39 GHz licensees commence construction within a certain timeframe.[109] TIA concurs with this suggestion because, at a minimum, it would ensure some availability of service and it would stimulate licensees to continue construction.

VII. THE COMMISSION MUST PROTECT 39 GHz BAND LICENSEES AND PENDING APPLICANTS

The Commission has taken several steps to make it more difficult for 39 GHz applicants to obtain licenses without an auction, including imposing a freeze on processing certain existing and all new applications for licenses or license modifications.[110] To solve this problem, TIA makes several recommendations:

- The Commission must lift its application processing freeze on all 39 GHz band applications filed by the December 15, 1995, release date of the NPRM.
- The Commission must permit any mutually exclusive 39 GHz band applicants meeting this deadline to file amendments involving frequency conflicts no later than 60 days after release of a Report and Order in this proceeding (the "Amendment Deadline").

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[108]ART at 13.

[109]BizTel at 34; Bachow at 14.

[110]See Public Notice, "Common Carrier Bureau Established Policy Governing the Assignment of Frequencies in the 38 GHz and Other Bands to Be Used in Conjunction With PCS Support Communications," 75 Rad. Reg. (P&F) 2d 1341 (1994); Order, RM-8553 (DA 95-2341, released November 13, 1995).

- The Commission promptly must grant all eligible pending 39 GHz band applications, including those applications filed by the Application Deadline.

- The Commission must give current 39 GHz band licensees, as well as the applicants granted licenses under TIA's plan, an appropriate period of time to meet build-out requirements based upon service area population or population density.

The Commission's treatment of 39 GHz licensees is widely criticized.[111] Several parties justifiably complain that the Commission's policy merely is designed to increase auction revenues and that such a policy contravenes Section 309(j) of the Act.[112] Without any support on the record or under the Act for its processing policy, the Commission has no choice but to lift the freeze and take corrective action consistent with the approaches proposed by TIA and numerous other parties.

CONCLUSION

The record supports opening the 37 GHz band for FS users, harmonizing rules for 37 GHz and 38 GHz band users, and adopting minimal technical rules designed to protect against harmful interference. Permitting mobile users into the band and sharing the band with Government users is not supported by the record. Using auctions, while unlawful under the Act, is condoned by the parties, but PCS and private FS users must not be required in incur these entry costs. Formulating new build-out requirements and lifting the 39 GHz application processing freeze is compelled by the record.

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[111] See, e.g., Ameritech at 4; DMC at 2; DCT at 29-36; Alcatel at 2; GTE at 6-7; Astrolink at 5-9; Commco at 3-4; Columbia at 5-12; Bachow at 5-6.

[112] See, e.g., Commco at 5; DCT at 16-24; BizTel at 23.

Based upon the foregoing, TIA strongly recommends that the Commission adopt the proposals in the NPRM, provided that the following rules are included:

- Mobile users must be excluded from the 37-40 GHz band. Mobile receiver selectivity characteristics preclude sharing with FS users. Coordination of sharing would be unrealistic to accomplish. Sharing would allow two completely different and incompatible technologies in the 37-40 GHz band.

- Harmonization of the channelization and technical rules for the 37 and 39 GHz bands must be established. Availability of cost-effective equipment would be expedited and a competitive equipment market would be encouraged.

- Appropriate interference protection standards and streamlined procedures for precluding harmful interference to and from authorized FS operations must be developed and implemented.

- The introduction of FSS into the 37-40 GHz band (i.e., Motorola Satellite's proposal) should not be permitted until need for such spectrum is demonstrated. Moreover, feasibility studies must be completed which prove such sharing is possible without degrading FS operations.

- Sharing with Government users should not be permitted or should be limited to only a few channels. Sharing with Government space research is unacceptable because it would severely degrade FS operations.

- To avoid having to make an unexpected second payment for their systems, PCS licensees should be exempt from auctions for a limited period. Use of auctions for private FS licenses is unfair. These users should not be required to pay entry costs. As an alternative, user fees could be considered.

- Establishment of firm requirements for completion of build-out is inappropriate in a "demand driven" market. If build-out requirements are adopted, they should apply equally to all users of the entire 37-40 GHz band.

- The "freeze" on processing existing "39 GHz" applications and the modifications thereof should be lifted.

Respectfully submitted,

FIXED POINT-TO-POINT COMMUNICATIONS SECTION, NETWORK EQUIPMENT DIVISION OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION

GEORGE M. KIZER, CHAIRMAN
DENIS COUILLARD, VICE CHAIRMAN
ERIC SCHIMMEL, VICE PRESIDENT OF TIA

2500 Wilson Blvd., Suite 300
Arlington, Virginia 22201

(703) 907-7700

Of Counsel:

Robert J. Miller
Gardere & Wynne, L.L.P.
1601 Elm Street, Suite 3000
Dallas, Texas 75201
(214) 999-3000

March 29, 1996
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ATTACHMENT 1

Advanced Radio Telecom Corp. ("ART")
Alcatel Network Systems, Inc. ("Alcatel")
Altron Communications, L.C. ("Altron")
Ameritech Corporation ("Ameritech")
Angel Technologies Corporation ("Angel")
Association for Local Telecommunications Services ("ALTS")
AT&T Wireless Services, Inc. ("AT&T")
Bachow and Associates, Inc. ("Bachow")
BizTel, Inc. ("BizTel")
Cambridge Partners, Inc. ("CPI")
Columbia Millimeter Communications, L.P. ("Columbia")
Commco, L.L.C. ("Commco")
DCR Communications, Inc. ("DCR")
DCT Communications, Inc. ("DCT")
Digital Microwave Corporation ("DMC")
GHz Equipment Co., Inc. ("GEC")
GTE Service Corporation ("GTE")
Harris Corporation-Farinon Division ("Harris")
INNOVA Corporation ("INNOVA")
Microwave Partners d/b/a Astrolink Communications ("Astrolink")
Microwave Radio Corporation ("MRC")
Milliwave Limited Partnership ("Milliwave")
Motorola Satellite Communications, Inc. ("Motorola Satellite")
National Spectrum Managers Association ("NSMA")
No Wire, L.L.C. ("No Wire")
Pacific Bell Mobile Services ("Pacific Bell")
Personal Communications Industry Association ("PCIA")
Rand McNally & Company ("Rand McNally")
Sintra Capital Corporation ("Sintra")
Southfield Communications, L.L.C. ("Southfield")
Spectrum Communications, L.C. ("Spectrum")
Telco Group, Inc. ("TGI")
Fixed Point-to-Point Communications Section, Network Equipment Division of the Telecommunications Industry Association ("TIA")
Telephone & Data Systems, Inc. ("TDS")
The PCS Fund
WinStar Communications, Inc. ("WinStar")

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Reply Comments will be mailed via first class mail, postage prepaid, to the following parties on the first day of April, 1996.

Walter H. Sonnenfeldt, Esq.
Walter Sonnenfeldt & Associates
4904 Ertter Drive
Rockville, Maryland 20852
Counsel for Biztel, Inc.

W. Theodore Pierson, Jr.
Executive Vice President
and General Counsel
Advanced Radio Telecom Corp.
1667 K Street, N.W.
Eighth Floor
Washington, D.C. 20006

R. Michael Senkowski, Esq.
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D.C. 20006
Counsel for GTE Service Corporation

Thomas A. Hart, Jr., Esq.
Ginsburg, Feldman and Bress
1250 Connecticut Avenue, N.W.
Eighth Floor
Washington, D.C. 20554
Counsel for The PCS Fund

Michael K. Owens
Senior Member, Technical Staff
Ameritech Corporation
2000 West Ameritech Center Drive
Location 3C46
Hoffman Estates, Illinois 60196-1025

Donald J. Evans, Esq.
McFadden, Evans & Sill, P.C.
1627 Eye Street, N.W., Suite 810
Washington, D.C. 20006
Counsel for Telco Group, Inc.

William R. Richardson, Jr., Esq.
Wilmer, Cutler & Pickering
2445 M Street, N.W.
Washington, D.C. 20037
Counsel for DCR Communications, Inc.

Deborah Lipoff, Esq.
Associate General Counsel
Rand McNally & Company
8255 North Central Park
Skokie, Illinois 60076

O. James Klein
President and Manager
Altron Communications, L.C.
2038 East Kael Circle
Mesa, Arizona 85213

Bruce R. Francis, Manager
Spectrum Communications, L.C.
7521 East Edgemont
Scottsdale, Arizona 85257

Steven P. Seiter, President
GHz Equipment Co., Inc.
1834 East Baseline Road
Suite 202
Tempe, Arizona 85283

Robert A. Mazer, Esq.
Vinson & Elkins, L.L.P.
1455 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Counsel for Angel Technologies Corporation

Robert J. Keller, Esq.
Law Office of Robert J. Keller, P.C.
2000 L Street, N.W., Suite 200
Washington, D.C. 20036
Counsel for Bachow and Associates, Inc.

Richard J. Metzger, Esq.
General Counsel
Association for Local Telecommunications Services
1200 19th Street, N.W., Suite 560
Washington, D.C. 20036

Philip L. Malet, Esq.
Steptoe & Johnson, L.L.P.
1330 Connecticut Avenue, N.W.
Washington, D.C. 20036
Counsel for Motorola Satellite Communications, Inc.

Paul Obert
Vice President, Digital Radios
Microwave Radio Corporation
20 Alpha Road
Chelmsford, Massachusetts 01824

William M. Custer, Secretary
Cambridge Partners, Inc.
14 South High Street
New Albany, Ohio 43054

James W. O'Keefe
1088 Park Avenue
Suite 7F
New York, New York 10128

Peter G. Schiff, Member
Southfield Communications, L.L.C.
485 Underhill Boulevard
Syosset, New York 11791

James J. Freeman, Esq.
Reed, Smith, Shaw & McClay
1301 K Street, N.W., Suite 1100 - East Tower
Washington, D.C. 20005-3317
Counsel for No Wire, L.L.C.

Leonard Robert Raish, Esq.
Fletcher, Heald & Hildreth, P.L.C.
1300 North 17th Street, Eleventh Floor
Rosslyn, Virginia 22209-3801
Counsel for INNOVA Corporation, Harris Corporation-Farinon Division, and Digital Microwave Corporation

Louis Gurman, Esq.
Blask & Freedman, Chartered
1400 16th Street, N.W., Suite 500
Washington, D.C. 20036
Counsel for Commco, L.L.C. and Sintra Capital Corporation

Jonathan D. Blake, Esq.
Covington & Burling
P.O. Box 7566
Washington, D.C. 20044
Counsel for Columbia Millimeter Communications, L.P.

Carl W. Northrop, Esq.
Paul, Hastings, Janofsky & Walker
1299 Pennsylvania Avenue, N.W.
10th Floor
Washington, D.C. 20004
Counsel for Milliwave Limited Partnership

Thomas J. Dougherty, Jr., Esq.
Gardner, Carton & Douglas
1301 K Street, N.W., Suite 900, East Tower
Washington, D.C. 20005
Counsel for DCT Communications, Inc.

Gina Harrison
Director, Federal Regulatory Relations
Pacific Bell Mobile Services
1275 Pennsylvania Avenue, N.W.
Suite 400
Washington, D.C. 20004

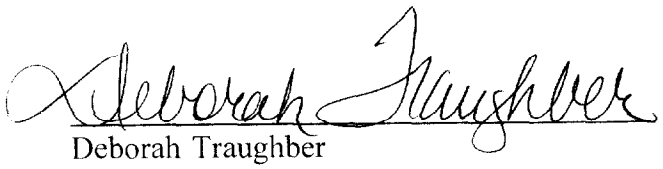
George Y. Wheeler, Esq.
Koteen & Naftalin, L.L.P.
1150 Connecticut Avenue
Washington, D.C. 20036
Counsel for Telephone & Data Systems, Inc.

Philip L. Verveer, Esq.
Willkie, Farr & Gallagher
Three Lafayette Centre
1155 21st Street, N.W.
Washington, D.C. 20036-3384
Counsel for WinStar Communications, Inc.

William R. Lye, President
National Spectrum Managers Association
R.R. 7, Box 87
Fulton, New York 13069

Mark J. Golden, Vice President
Personal Communications Industry Association
1019 19th Street, N.W.
Washington, D.C. 20036

Cathleen A. Massey
AT&T Wireless Services, Inc.
1150 Connecticut Avenue, N.W., Fourth Floor
Washington, D.C. 20036


Deborah Traughber

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